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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/717,771	11/21/2000	Koji Hayashi	10449-028001	9013

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EXAMINER
PSITOS, ARISTOTELIS M

ART UNIT	PAPER NUMBER
2653	

DATE MAILED: 02/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/717,771	Applicant(s) HAYASHI, KOJI	
	Examiner Aristotelis M Psitos	Art Unit 2653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 December 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5 and 7-9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *all* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/6/02 has been entered.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the ability of the interrupt control circuit connected to the laser drive circuit performing the function recited/claimed (claim 1 for instance) when the laser beam is generated at the relatively low power level must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

As interpreted by the examiner, applicants' disclosed invention is predicated on the recognition/existence of two conditions to exist prior to any ability to interrupt the laser drive circuit, the ability of the buffer underrun circuit to detect that such a condition MAY exist, and the existence of the appropriate sync pattern – the consecutive 11 low bits – which is when the laser beam is generating a relatively low power level. Unfortunately, there is NO DISCLOSURE of any such element/ability to recognize the simultaneous existence of these two critical

conditions. Hence the claims are not

a) supported by the disclosure – the insufficient disclosure,
b) the claims fail to recite critical feature – the sych pattern –
c) the claims scope is beyond/not in agreement with what is disclosed -
See the particular rejections below.

4. Claims 1, 3, 9 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The existence of both the possibility of a buffer underrun condition exists and the existence of the sync pattern is critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). See the above analysis of the disclosed invention. None of these claims claim both conditions.

5. Claims 1-5, & 7-9 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. See the above insufficient disclosure ability – e.g., no disclosed ability/element to recognize the existence of both conditions.

6. Claims 1, 3 & 9 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the ability of interrupting the system upon the possibility of a buffer underrun condition does not reasonably provide enablement for the interrupt control circuit to operate with a relatively low power level without the detection of the sync pattern. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims. See the above analysis of what the disclosed invention provides.

As argued in applicant's communication of 12/6/02 the relatively low power level is essential and critical to applicant's invention. Nevertheless, there is no element to detect or recognize the existence of such a condition. Hence interpreting the independent claims requiring such a limitation, either such a limitations inherently follows from the elements positively recited or have not been properly positively

presented by any of the limitations presently found in the independent claims. Since the claims are understandable under 35 USC 1/12 paragraph 2, the examiner concludes that these claims fail under 35 USC paragraph 1, e.g. the critical feature is not claimed, nor is their support for such a disclosure. Furthermore, with respect to the phrase relatively low level, because no such level has been define, or what power levels are to be included in such a limitation, the examiner makes the following art rejections.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 3, 4 and 5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In particular, claim 3 recites both a restart circuit and an interrupt control circuit. This is not understood, since as originally disclosed, there is only ONE SUCH ELEMENT – 43 which performs these two functions. Hence the examiner is not certain as to what TWO elements as claimed this language is referring to. Further elaboration is respectfully requested. Dependent claims 4 and 5 ado not clarify the above and fall with their respective parent claim.

AS FAR AS THE CLAIMS RECITE POSITIVE LIMITATIONS AND AS INTERPRETED BY THE EXAMINER THE FOLLOWING ART REJECTIONS ARE MADE.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. Claims 1, 3 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2000-40302 further considered with either Yamasake et al and Yoshikawa, or alternatively with Yokota.

Applicant's attention is drawn to either the previously supplied MAT of the above JP document or EP 0974966, the EP equivalent. In either case, the ability of generating a decision from a buffer underrun element that a underrun may occur is provided for. This then interrupts the appropriate circuitry for generating the information onto the record medium. There is no discussion that the interruption circuit also is aware of a "low power level".

The documents to Yamasaki et al & Yoshikawa disclose/teach in this environment the ability of interrupting/control the laser during an abnormal condition of the recording laser power. Although it is not specifically discussed as being a "low power level", that such (low power level) is part of an "abnormal condition" is considered to be inherent.

Alternatively, Yokota teaches the ability of detecting a malfunctioning condition and appropriately controlling the laser appropriately – see col. 14 lines 21-49 which specify inhibiting when the detected level is lower that a predetermined level.

It would have been obvious to modify the base system of JP 2000-40302/EP 0974966 with the above additional teaching from either the Yokota or Yamasaki et al & Yoshikawa combination to provide for a second condition of "low power level" as well as the buffer underrun possibility, motivation is to appropriately control the laser so as to inhibit damage to the recording medium by inhibiting recording during recognized conditions.

With respect to claims 3 and 9, these includes the additional address memory and synchronizing circuit and restart circuit and functions thereof (claim 3), while claim 9 is interpreted as the analogous method claim. These additional elements are already present in the above noted JP document -EP, see the descriptions of elements 19, 20 and 15 and the overall operation thereof.

12. Claims 2, 4 & 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claims 1 and 3 above, and further in view of the acknowledged prior art with respect to the presence of the sync signal pattern and Koishi/Official notice.

Claims 2 and 4 requires the additional ability of the sync pattern data as being the defined "low power level". The existence of these sync patterns is acknowledged by applicant as being well known. Hence to include such a pattern, or alternatively to use the above system in which the acknowledged cds are the record medium is considered obvious, motivation is to permit the system to record upon established cd standards. Furthermore, these claims are interpreted to limit the "low power level" as the sync pattern. As noted in Koishi when a signal dropout occurs, his system interrupts recording. Alternatively, loss of sync signal(s), patterned or otherwise and the subsequent suspending/interrupting, stopping of a recording function is well Known. The use of VCRs in order to record any information requires appropriate control signals/sync. - time base errors, drop out, and upon loss of such the system operation is interrupted/stopped. Official notice is taken of recording systems that no longer perform such an operation upon loss of sync. /time base.

It would have been obvious to modify the system as relied upon in paragraph 9 above with respect to claims 1 and 3 and modify such with the additional sync. pattern (acknowledged prior art) for the reasons stated above, and to further modify this with the additional loss of sync condition as further taught by Koishi/Official notice, motivation is to prevent any system operation until appropriate control signal/time base is provided for to ensure proper recording.

With respect to the limitations of claim 5, they are already present in the base JP/EP document and no further motivation is considered necessary.

13. Claims 7 & 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2000/40302 further considered with the acknowledged prior art and further with Koishi/Official notice.

With respect to claims 7 & 9, the JP/EP document discloses a recording system wherein a buffer underrun condition possibility is recognized and the laser drive circuitry is appropriately interrupted. There is no mention of a sector synch pattern as being the "low power level".

Applicant has acknowledged as part of the prior art, the existence of sector sync patterns as being "low power level". The ability of using the JP/EP system with existing cd formats so as to expand the discs able to be used is considered motivation to provide such well-known sync patterns.

Furthermore, the ability to further include in the interrupt/circuit claim 7 or ability claim 9, additional circuitry to recognize drop out (Koishi) – which the examiner interprets as including sync. signals, or "loss of sync"/ time base – (Official notice) is considered obvious because recognition of such additional system failures will further prevent overall system failure. That is, only providing for the recording ability of the JP/EP system during periods in which neither drop out/time base error and buffer underrun occurs prevents waste of signal Processing time/recording time as well as preventing loss of information and or damage to previously recorded information already present on the record medium.

14. Claims 1, 3 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 10-63433/Kuroda et al further considered with either Yamasaki et al & Yoshikawa, or alternatively with Takasugi.

As found in the Kuroda et al document – US equivalent of the JP 10-63433 system, the ability to provide for an interruption of recording predicated upon the detection that a buffer underrun condition may occur, as well as permitting re-starting at the appropriate locations is disclosed in these documents.

There is no additional ability of having the interruption to also include a "low power level" detection.

The documents to Yamasaki et al & Yoshikawa disclose/teach in this environment the ability of interrupting/control the laser during an abnormal condition of the recording laser power. Although it is not specifically discussed as being a "low power level", that such (low power level) is part of an "abnormal condition" is considered to be inherent.

Alternatively, Takasugi teaches the ability of detecting a malfunctioning condition and appropriately controlling the laser appropriately – see the description of figure 11, which specify inhibiting when the recording power level deviates from the appropriate limited range.

It would have been obvious to modify the base system of JP 10-63433/Kuroda et al with the above additional teaching from either the Yokota or Yamasaki et al, or either further with Takasugi, in order to provide for the second condition of "low power level" as well as the buffer underrun possibility, motivation is to appropriately control the laser so as to inhibit damage to the recording medium by inhibiting recording during recognized conditions, and or to reduce unnecessary signal processing time by appropriately interrupting the recording process when improper system conditions exist.

With respect to claims 3 and 9, these includes the additional address memory and synchronizing circuit and restart circuit and functions thereof (claim 3), while claim 9 is interpreted as the analogous method claim. These additional elements are already present in the above noted JP document US, see the descriptions of elements within block S and as further depicted in figure 4 and discussed therewith e.g. col. 2 line 55 – Summary of the invention.

Response to Arguments

15. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Fukuda is cited as also illustrating abnormal sync sign. as well as interrupting recording.

Any inquiries concerning missing papers/references, etc. must be directed to: Group 2600 Customer Services at (703) 306-0377.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is: (703) 30504700.

Any inquiry concerning the merits of this communication or earlier communication from the examiner should be directed to Aristotelis M. Psitos whose telephone number is: (703) 308-1598. The examiner can normally be reached on Monday-Thursday 8-4 EST. Messages can be left on the recording device.

If attempts to reach the examiner, or any of the above telephone contact points are unsuccessful, the examiner's supervisor, W. Korzuch can be reached on: (703) 305-6137.

The FAX number for the organization where this application or proceeding is assigned is: (703) 872-9314.

Aristotelis M. Psitos
Senior Primary Patent Examiner
Art Unit 2653

AMP
February 13, 2003